

a medium having a carbon source concentration of at least 4% by weight at the start of culturing, thereby forming arachidonic acid or lipid containing arachidonic acid and recovering arachidonic acid, wherein the microorganism produces arachidonic acid of at least about 7 g/L when cultured in a medium containing at least about 4% carbon source at the start of culturing and at least about 2% nitrogen source at the start of culturing for about 5 to 10 days with agitation and aeration.

Please add the following new claim 33:

--33. (New) A process for producing arachidonic acid or lipid containing arachidonic acid comprising the steps of culturing a microorganism, belonging to the genus *Mortierella* and having resistance to a carbon source of high concentration, in a medium having a carbon source concentration of at least 4% by weight at the start of culturing, thereby forming arachidonic acid or lipid containing arachidonic acid and recovering arachidonic acid, wherein the microorganism produces arachidonic acid of at least about 7 g/L when cultured in a medium containing at least about 4% carbon source at the start of culturing and at least about 2% nitrogen source at the start of culturing for about 5 to 10 days with agitation and an aeration rate of at least about 1 vvm.--